

WHAT IS CLAIMED IS:

1. A fuse arrangement for a vehicle comprising:
a wiring terminal having a plurality of discrete
circuits extending therefrom;
a common bus assembly; and
at least one axial fuse disposed between at least
one of the plurality of circuits in the wiring terminal
and the common bus assembly for electrically connecting
the common bus assembly to at least one of the plurality
of discrete circuits through the at least one axial fuse.

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2. The fuse arrangement of Claim 1, further
comprising:

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a housing having a cover and a base portion, wherein
the wiring terminal is contained within the base portion
and the common bus assembly is contained within the cover
of the fuse box.

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3. The fuse arrangement of Claim 1, wherein the
axial fuse further comprises first and second male
terminal portions that are configured to mate with
respective female portions within the wiring terminal and
common bus assembly.

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4. The fuse arrangement of Claim 1, wherein the
axial fuse further comprises first and second female
terminal portions that are configured to mate with

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respective male portions within the wiring terminal and common bus assembly.

5. The fuse arrangement of Claim 1, wherein the common bus assembly further comprises a common bus having a plurality of fuse terminal connections extending therefrom, the common bus and plurality of fuse terminal connections being disposed in a single enclosure.

10. The fuse arrangement of Claim 1, wherein the wiring terminal includes a plurality of discrete circuits that are, in turn, connected to respective electrical loads respectively protected by the at least one fuse disposed between the wiring terminal and the common bus fitting.

15. The fuse arrangement of Claim 2, wherein the housing is constructed, at least in part, of a thermally conductive material facilitating the removal of heat from elements contained within the fuse box.

20. An apparatus for packaging vehicle fuses comprising:

25. a carrier strip having at least one rail comprised of a flexible material;

a plurality of fuse assemblies integrally connected to the at least one rail, each of the plurality of fuse

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assemblies configured to be removable from the rail and configured to be separable from the at least one rail for individual use by an end user; and

5 wherein the carrier strip is so constructed and arranged that it can be rolled to form a package for shipping to the end user.

9. The apparatus of Claim 8, wherein:

10 the carrier strip includes two parallel rails and each of the plurality of fuse assemblies is integrally connected between the parallel rails.

15 10. The apparatus of Claim 8, wherein the plurality of fuse assemblies is comprised of axial-type fuses.

11. The apparatus of Claim 8, wherein each of the plurality of fuse assemblies is comprised of radial-type fuses.

20 12. The apparatus of Claim 8, wherein the carrier strip contains a plurality of indexing apertures, each of the indexing apertures associated with a corresponding fuse assembly, wherein the indexing apertures facilitate the removal of the fuse assemblies from the carrier strip and separation of the fuse assemblies from each other by 25 the end user.

13. A vehicle fuse array assembly comprising:
a planar, electrically insulating substrate having
at least two planar sides;

5 a metallization pattern disposed on at least one
side of the planar substrate, the metallization pattern
comprising at least one fuse element; and

10 a protective coating disposed on at least a
respective portion of at least one side of the planar
substrate and covering at least a first portion of the
metallization pattern.

14. The vehicle fuse array assembly of Claim 13,
wherein a second portion of the metallization pattern is
not covered by the protective coating, the second portion
15 configured as a contact portion of the assembly.

15. The vehicle fuse array assembly of Claim 13,
wherein the second portion of the metallization pattern
comprises at least one terminal of the at least one fuse
20 element.

16. The vehicle fuse array assembly of Claim 13,
wherein the at least one fuse element is an axial-type
fuse.

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17. The vehicle fuse array assembly of Claim 13,
wherein the metallization pattern further comprises a

common terminal that is electrically connected to a terminal of the at least one fuse element.

5 18. The vehicle fuse array assembly of Claim 13, wherein the fuse array assembly is configured to mate with a terminal arrangement of a vehicle fuse box.

10 19. A fuse box arrangement for a vehicle comprising:

15 a fuse box having a base and a cover;

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a common bus terminal within the fuse box, the common bus terminal connected to a voltage supply;

20 a plurality of wire terminals within the fuse box, each of the plurality of wire terminals connected to a discrete circuit; and

25 a fuse array having at least one axial fuse arranged between the base and the cover of the fuse box, the axial fuse electrically connecting the common bus terminal with the discrete circuit.

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20. The fuse box arrangement of Claim 19, wherein the common bus terminal is affixed to the cover.

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21. The fuse box arrangement of Claim 19, wherein the plurality of wire terminals is affixed to the base.

22. The fuse box arrangement of Claim 19, wherein the common bus terminal is affixed to the base.

5 23. The fuse box arrangement of Claim 19, wherein the plurality of wire terminals is affixed to the cover.

24. The fuse box arrangement of Claim 19, wherein the fuse array further comprises:

10 a planar, electrically insulating substrate having at least two planar sides;

a metallization pattern disposed on at least one side of the planar substrate, the metallization pattern comprising at least one fuse element;

15 a protective coating disposed on at least a respective portion of at least one side of the planar substrate and covering at least a first portion of the metallization pattern; and

20 a second portion of the metallization pattern that is not covered by the protective coating, the second portion configured as a contact portion of the fuse array.

25 25. The fuse box arrangement of Claim 19, wherein the common bus terminal further comprises a plurality of contact terminals that are configured to connect to first terminals of each of the plurality of fuses within the fuse array, wherein the common bus terminal is configured

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to simultaneously connect all of the contact terminal therein with the first terminals of each of the fuses when connecting the common bus terminal to the first terminals.

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26. A method for manufacturing vehicle fuse boxes having a reduced size comprising the steps of:

10 separating the location of a bus assembly and a wiring harness so they are located on opposite sides of a fuse box including a top and a bottom; and

15 electrically connecting the bus assembly and a circuit of the wiring harness using an axial fuse that extends between the top and the bottom of the fuse box.

27. The method of Claim 26 including the step of constructing the housing of the fuse box, at least in part, of a thermally conductive material to improve the dissipation of heat that is generated.

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